

SIEMENS

ARCADIS

SP

Installation and Startup

Option

Installation Video Splitter

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Requirements

Scope of this document

This document applies to the installation of the add-ons "Video splitter low end live," material no. 80 79 829 and "Video splitter low end ref," material no. 80 79 837.

Documents required

System binder

Required Parts

"Video splitter low end live", material no. 80 79 829.

and / or

"Video splitter low end ref", material no. 80 79 837.

Required Tools

Standard tool kit

Protective conductor test device, e.g., Safety Tester Unimet 1100, 51 38 727

Safety information

General safety information (in existing documents)



Danger of injuries, death or material damage.

Non-compliance can lead to death, injury or material damage.

Please note:

- ⇒ The product-specific safety notes in these instructions,
- ⇒ The general safety information in TD00-000.860.01... and
- ⇒ The safety information in accordance with ARTD Part 2.

General electrical safety information



Electrical safety!

Non-compliance can lead to severe injury or even death, as well as material damage.

- ⇒ Parts under electrical voltage are accessible when the covers are open. To avoid danger, disconnect the system from the power supply before opening the covers. Disconnect the power plug.
- ⇒ If an uninterruptible power supply (UPS) is installed in the system, the voltage output of the UPS must also be deenergized or the voltage output plug must be disconnected.
- ⇒ If work steps must be performed using electrical power, the general safety information according to TD00-000.860.01... must be observed.

Information on the protective conductor resistance test

Observe the instructions in the "Safety Rules for Installation and Repair" (ARTD-002.731.17 ...).

The protective conductor resistance must be measured after every intervention in the system.

However, documentation of the measured values is required only during periodic safety checks.

If parts or components that can significantly influence the protective conductor resistance (e.g., replacement of the power cable, replacement of the power-up module, replacement of multi-pole connection cables which also create the protective conductor connection between system parts (e.g., monitor cable or C-arm cable)) are replaced or if protective conductor connections have been repaired, the protective conductor resistance must be measured. The values must be documented and assessed in the protective conductor resistance report.

NOTE

For evaluation purposes, the first measured value and the values documented during maintenance or safety checks must be compared to the measured values. A sudden or unexpected increase in the measured values may indicate a defect in the protective conductor connections - even if the limit value of 0.2 ohms is not exceeded. (Protective conductor or contacts).

The measurement must be performed according to DIN VDE 0751, Part 1 (see ARTD Part 2). The protective conductor resistance for all touchable conductive parts must be measured during the normal operating state of the system.

Make sure that control cables or data cables between the components of the system are not mistaken for protective conductor connections.

During the measurement, the power cable and additional connection cables which also create the protective conductor connection between system parts (e.g. monitor cable between the basic unit and monitor trolley) must be moved section by section to detect cable breaks.

The protective conductor resistance must not exceed 0.2 Ohms.

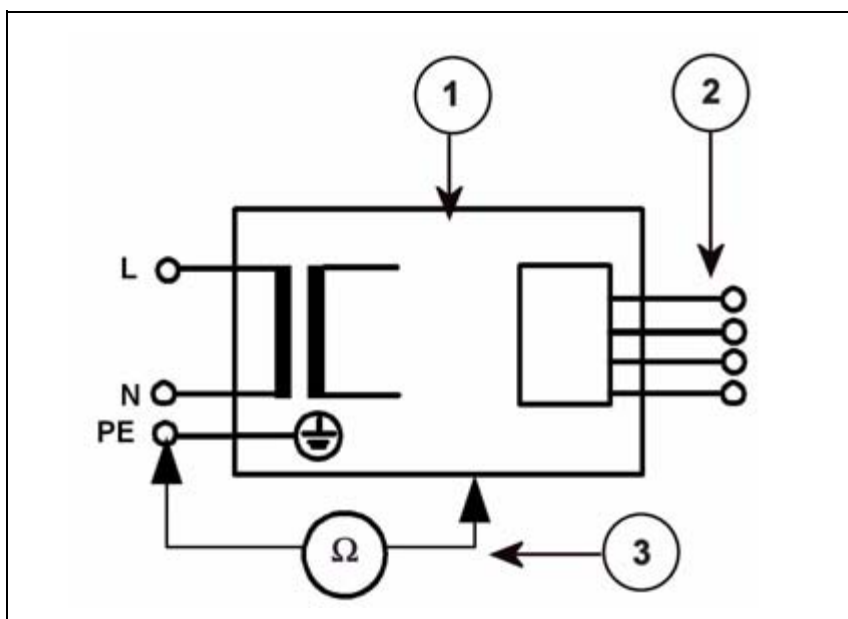


Fig. 1: Measuring circuit for measuring the protective conductor resistance for units that are

disconnected from power, in compliance with DIN VDE 0751-1/2001-10, Fig. C2.

- Pos. 1 = System
- Pos. 2 = Application part type B (if available)
- Pos. 3 = Measurement setup (integrated into measuring device)

Installation

Installation frame installation preparation

Fig. 2 shows the contents of the Video splitter low end live kit, 86 70 829.

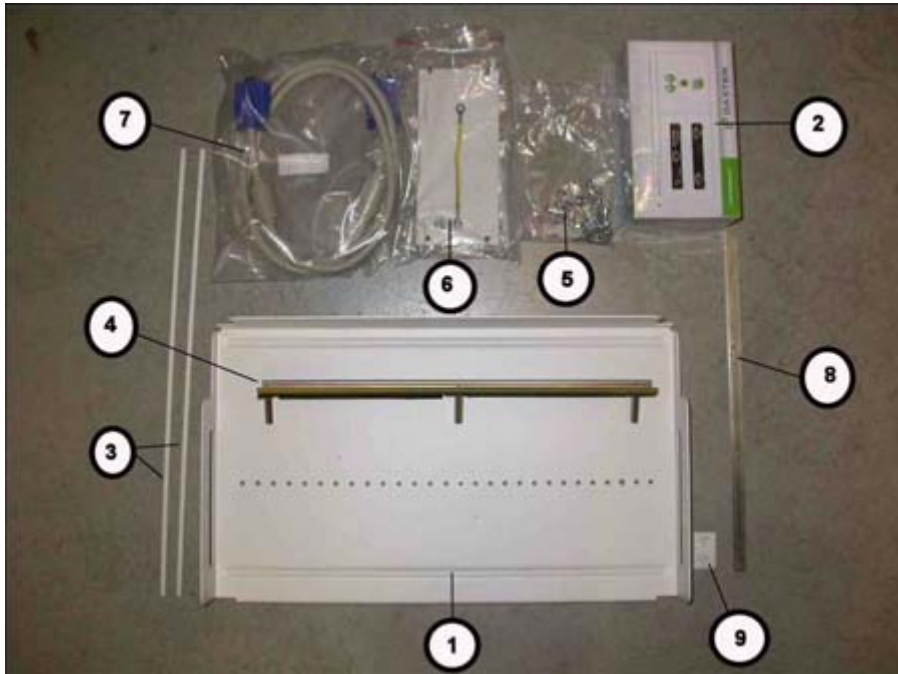


Fig. 2: Preparing the installation frame

- | | |
|--------|---|
| Pos. 1 | Installation frame |
| Pos. 2 | VGA video splitter |
| Pos. 3 | Struts |
| Pos. 4 | Holder |
| Pos. 5 | Installation of small parts |
| Pos. 6 | Cover plates, interface terminal, including small parts |
| Pos. 7 | VGA cable |
| Pos. 8 | Threaded plate |

- Remove the installation frame 1/ Fig. 2.
- Attach the two struts 3/ Fig. 2 to both sides of the installation frame, as shown in 1/ Fig. 3. Use the screws and washers included in the accessory kit 5/ Fig. 2.
- Attach the holder 4/ Fig. 2 to the installation frame, as shown in 2/ Fig. 3. Do so by screwing the threaded hex bolts (if not yet installed) onto the holder and installation frame.
- The video splitter 2/ Fig. 2 is held fast by the holder 4/ Fig. 2. See 3/ Fig. 3.
- If a second video splitter is to be installed ("Video splitter low end ref," material no. 80 79 837), it should also be clamped to the installation frame with the holder.

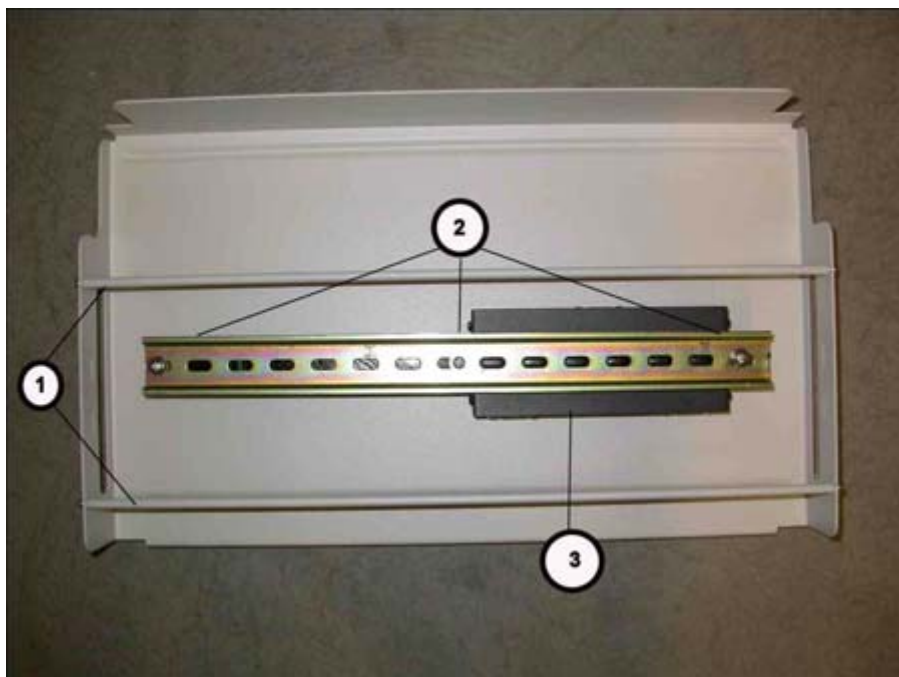


Fig. 3: Preparing the installation frame

- Pos. 1 Struts
- Pos. 2 Holder, mounted with bolts
- Pos. 3 VGA video splitter

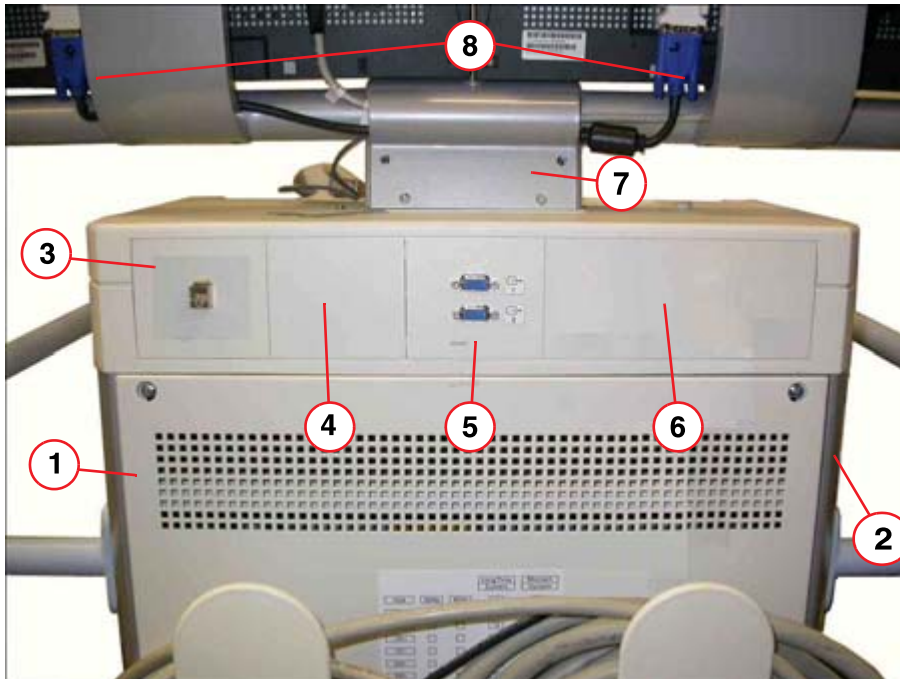
Installing external video sockets on interface terminal

Fig. 4: Monitor trolley, rear

- Pos. 1 Rear cover panel
Pos. 2 Left-hand cover panel
Pos. 3 Interface terminal
Pos. 4 Cover plate, short, interface terminal
Pos. 5 VGA interface plate
Pos. 6 Cover plate, long, interface terminal
Pos. 7 Cover plate, foot, monitor support
Pos. 8 VGA cables, monitor

Removing the cover panels

- Unscrew the rear cover panel of the monitor trolley 1/Fig. 4.
- Unscrew the left side cover panel 2/Fig. 4.

Removing the interface terminal

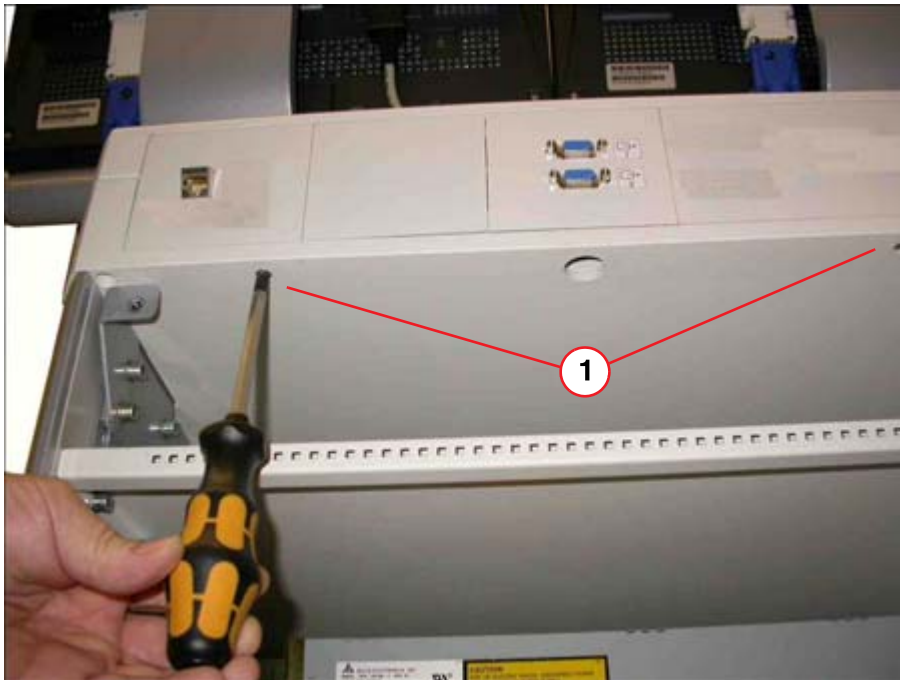


Fig. 5: Interface terminal monitor trolley

Pos. 1 Interface terminal mounting screws

- Remove the interface terminal. Do so by loosening the two screws 1/Fig. 5.

Installing the video sockets and dummy plates

- Unscrew the large dummy plate from the interface terminal.
- Mount the dummy plates and the cover plate with the two VGA sockets (included in accessory kit) as shown in Fig. 4 and Fig. 5. See 3/Fig. 4, 4/Fig. 4, 5/Fig. 4 and 6/Fig. 4.

Protective conductor connections of the cover plates on the interface terminal

- Run the protective conductor connections of the interface terminal cover plates from cover plate to cover plate, attaching them to each protective conductor bolt with a contact washer, washer, and nut. Make sure that the protective conductor connections make good contact.
- The entire interface terminal is connected to the monitor trolley and grounded with a protective conductor connection. Make sure that the protective conductor connections make good contact.

Affixing the safety label to the cover plate with the two video sockets

- Affix the safety label included in accessory kit, in the appropriate local language, directly underneath the video sockets. See 5/Fig. 6.

Wiring the video cables

NOTE

If only one video splitter is installed, please ask the customer whether the live video signal or the reference video signal should be available at the external video socket.

Wire the video splitter according to the customer's preference.

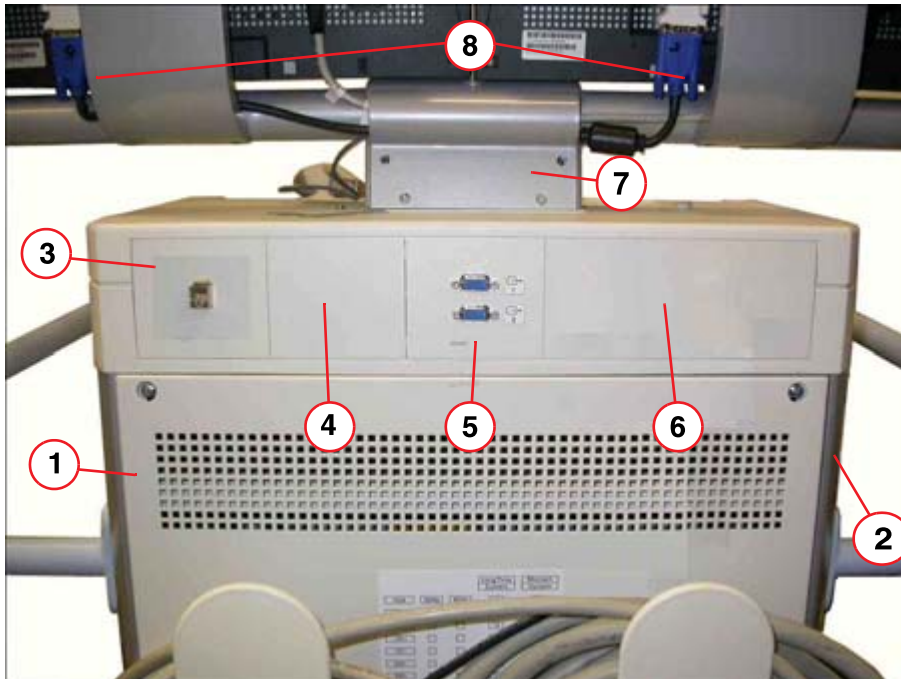


Fig. 6: Monitor trolley, rear

- Pos. 1 Rear cover panel
- Pos. 2 Left-hand cover panel
- Pos. 3 Interface terminal
- Pos. 4 Cover plate, short, interface terminal
- Pos. 5 VGA interface plate
- Pos. 6 Cover plate, long, interface terminal
- Pos. 7 Cover plate, foot, monitor support
- Pos. 8 VGA cables, monitor

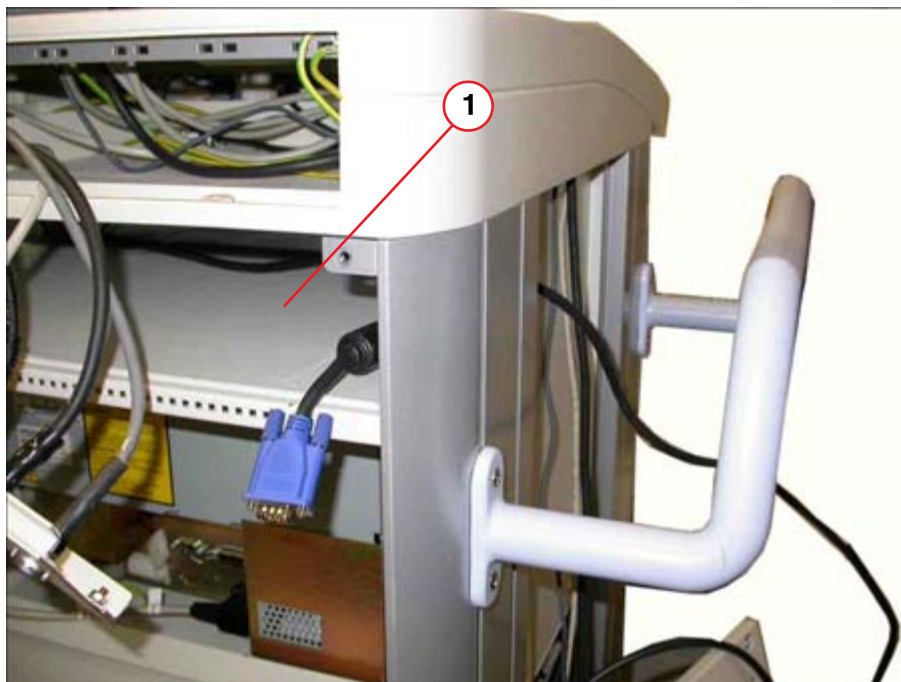


Fig. 7: Pulling in the video cables

Pos. 1 Installation frame installation location

Wiring the video cables - LIVE video signal

- Unscrew the cover panel 7/Fig. 6 at the foot of the monitor support.
- Unscrew and detach from the monitor the VGA plug of the existing video cable of the left-hand monitor (live monitor). See 8/Fig. 6. Pull the video cable out through the foot of the monitor support and run it to installation bay 1/Fig. 7. Label the cable or the plug: "LIVE IN". The other end of this VGA cable remains plugged into the graphics card of the image processor.
- Run the video cable included in the accessory kit 7/Fig. 2 from the installation bay 1/Fig. 7 through the foot of the monitor support to the live monitor, plug it in, and secure the screws. Label the end of the cable in the bay: "LIVE MON".
- Run the video cable included in the video splitter package from the installation bay 1/Fig. 7 to the interface terminal, plug it into the upper VGA socket and secure the screws. Label the end of the cable in the bay: "LIVE VGA socket"
- Affix the sticker marked "1," included with delivery (see 9/Fig. 2), to the right of the upper VGA socket.

Wiring the video cables - reference video signal

- Unscrew the cover panel 7/Fig. 6 at the foot of the monitor support.
- Unscrew and detach from the monitor the VGA plug of the existing video cable of the right-hand monitor (reference monitor). See 8/Fig. 6. Pull the video cable out through the foot of the monitor support and run it to installation bay 1/Fig. 7. Label the cable or the plug: "REF IN". The other end of this VGA cable remains plugged into the graphics card of the image processor.

- Run the video cable included in the accessory kit 7/Fig. 2 from the installation bay 1/Fig. 7 through the foot of the monitor support to the reference monitor, plug it in, and secure the screws. Label the end of the cable in the bay: "REF MON".
- Run the video cable included in the video splitter package from the installation bay 1/Fig. 7 to the interface terminal, plug it into the lower VGA socket and secure the screws. Label the end of the cable in the bay: "REF VGA socket"
- Affix the sticker marked "2," included with delivery (see 9/Fig. 2), to the right of the lower VGA socket.

Wiring video splitter +5V power supply

The video splitters are supplied by +5V from the PS2 keyboard socket of the imaging system. The video splitter accessory kit includes the cables for the power supply. See Fig. 8.



Fig. 8: 5V power supply, video splitter



Fig. 9: 5V power supply, video splitter on PS2 plug, imaging system computer

- Take the cables (Fig. 7) included in the video splitter accessory kit and run them from the installation bay 1/ Fig. 7 to the imaging system. Run the cable end with the molded-on PS2 plug and the molded-on PS2 coupling to the imaging system.
- At the imaging system, plug one cable into the PS2 keyboard socket, see Fig. 9. If applicable, plug the second cable into the coupling of the first cable. See Fig. 9.

Installing installation frame with video splitter

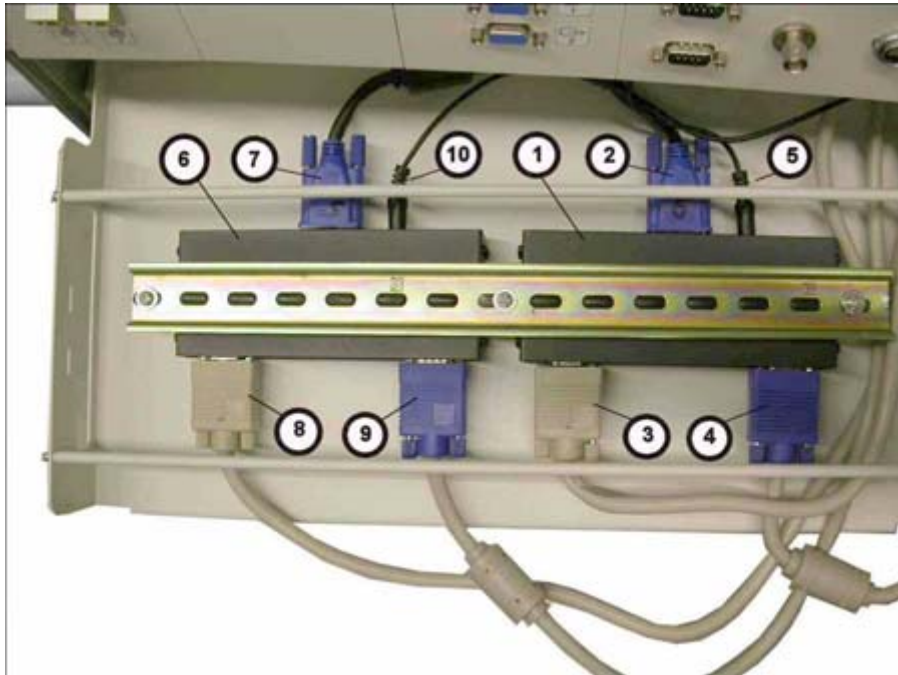


Fig. 10: Installation frame, with cabling complete

- Pos. 1 VGA video splitter LIVE
- Pos. 2 Video cable "VIDEO IN" from imaging system PC live out
- Pos. 3 Video cable "1" to interface terminal upper VGA socket (live out)
- Pos. 4 Video cable "2" to live monitor
- Pos. 5 5V power supply from imaging system PC PS2 keyboard socket
- Pos. 6 VGA splitter REFERENCE
- Pos. 7 Video cable "VIDEO IN" from imaging system PC reference out
- Pos. 8 Video cable "1" to interface terminal lower VGA socket (reference out)
- Pos. 9 Video cable "2" to reference monitor
- Pos. 10 5V power supply, video splitter, from imaging system PC PS2 keyboard socket

- Slide the installation frame with the video splitters into the installation bay 1/ Fig. 7.

Wiring the video splitter - LIVE video signal

- Plug the +5V power supplies into the power supply socket marked "5V DC" on the first video splitter.
- Plug the VGA plug of the "LIVE IN" cable into the "VGA IN" socket on the first video splitter, and secure the screws.
- Plug the VGA plug of the "LIVE MON" cable into the socket marked "1" on the first video splitter, and secure the screws.
- Plug the VGA plug of the "LIVE VGA socket" cable into the socket marked "2" on the first video splitter, and secure the screws.

Wiring the video splitter - reference video signal

- Plug the +5V power supplies into the power supply socket marked "5V DC" on the second video splitter.

- Plug the VGA plug of the "REF IN" cable into the "VGA IN" socket on the second video splitter, and secure the screws.
- Plug the VGA plug of the "REF MON" cable into the socket marked "1" on the second video splitter, and secure the screws.
- Plug the VGA plug of the "REF VGA socket" cable into the socket marked "2" on the second video splitter, and secure the screws.

Startup

Testing the video signals

- Connect the monitor trolley to the power supply and switch it on.
- Wait for the imaging system to boot.
- On the left-hand monitor, the screen of the live video signal must appear, recognizable by the two task cards “Examination” und “Viewing.”
- On the right-hand monitor, the screen of the reference video signal must appear, recognizable by the “Filming” and “Viewing” task cards and possibly others as well.
- From one of the video splitters, unplug the video cable to one of the monitors (LIVE MON or REF MON) and plug it in temporarily to the external VGA sockets. If there is one video splitter, the video signal agreed upon with the customer must be available at the upper video socket and be visible on the temporarily connected monitor. If there are two video splitters, the live video signal must be available at the upper video socket, the reference video signal must be available at the lower socket, and they must be visible on the temporarily connected monitor.
- On the right-hand monitor, the screen of the reference video signal must appear, recognizable by the “Filming” and “Viewing” task cards and possibly others as well.

Final Work Steps

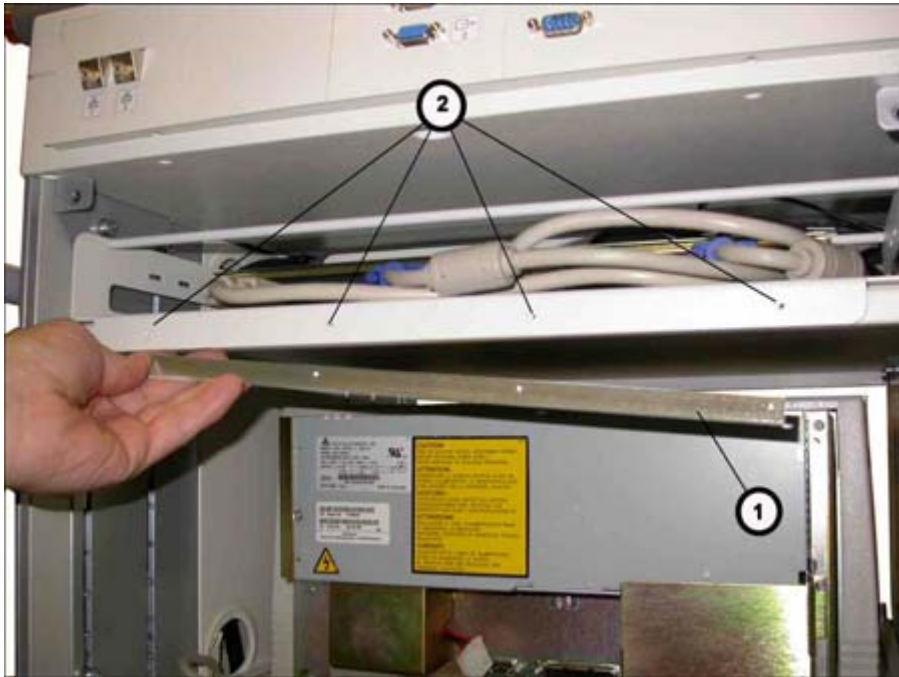


Fig. 11: Installing the Installation Frame

Pos. 1 Threaded plate

Pos. 2 Drilled holes in installation frame

Securing the installation frame

- Slide the installation frame all the way into the installation bay.
- Secure the installation frame with screws, washers (2/Fig. 11), and the threaded plate 1/Fig. 11, as shown in Fig. 11.

Securing the interface terminal

- Reinstall the interface terminal and secure it with the screws. See Fig. 5.
- Make sure that the protective conductors are connected correctly.

Routing the monitor cables

- The video and power cables to the monitors should be routed as shown in Fig. 4.
- Draw up any excess length into the interior of the monitor trolley.
- Secure the cover plate back onto the foot of the monitor support. Take care that the cables are not crushed and that the protective conductors are connected correctly.

Routing the cables in the installation bay

- Lay the video cables and the +5V power supply cables to the video splitters as loosely as possible in the installation bay and in the cable shaft at the side of the monitor trolley. Excess cable length need not be tied off, so that if servicing becomes necessary, the installation frame with the video splitters can be pulled out a short way.

Closing the cover panels

- Refit all covers. Take care that the cables are not crushed. Make sure that the protective conductor connections make good contact.

Protective conductor test

- Perform the protective conductor test according to ARTD-002.731.17... . The protective conductor resistance must not exceed 0.2 Ohm.

Customer information

- Instruct the customer in the operation of the external VGA video signal interface. If only one video splitter was installed, inform the customer which of the two video sockets supplies the desired video signal.

No changes; initial version.

